

Centers for Chemical Innovation Solicitation: NSF 20-574

Division of Chemistry Office Hours
June 12, 2020



Please mute your microphone

Submit relevant questions through
the chat feature



CCI Program Goals

- Address major, long-term **fundamental chemical research:**
Center Vision
- Potential for **transformative impact in chemistry**, high risk challenges
- Management Strategy promoting **synergy**, self-assessment and evolution
- Strong and integrated **Broader Impacts**

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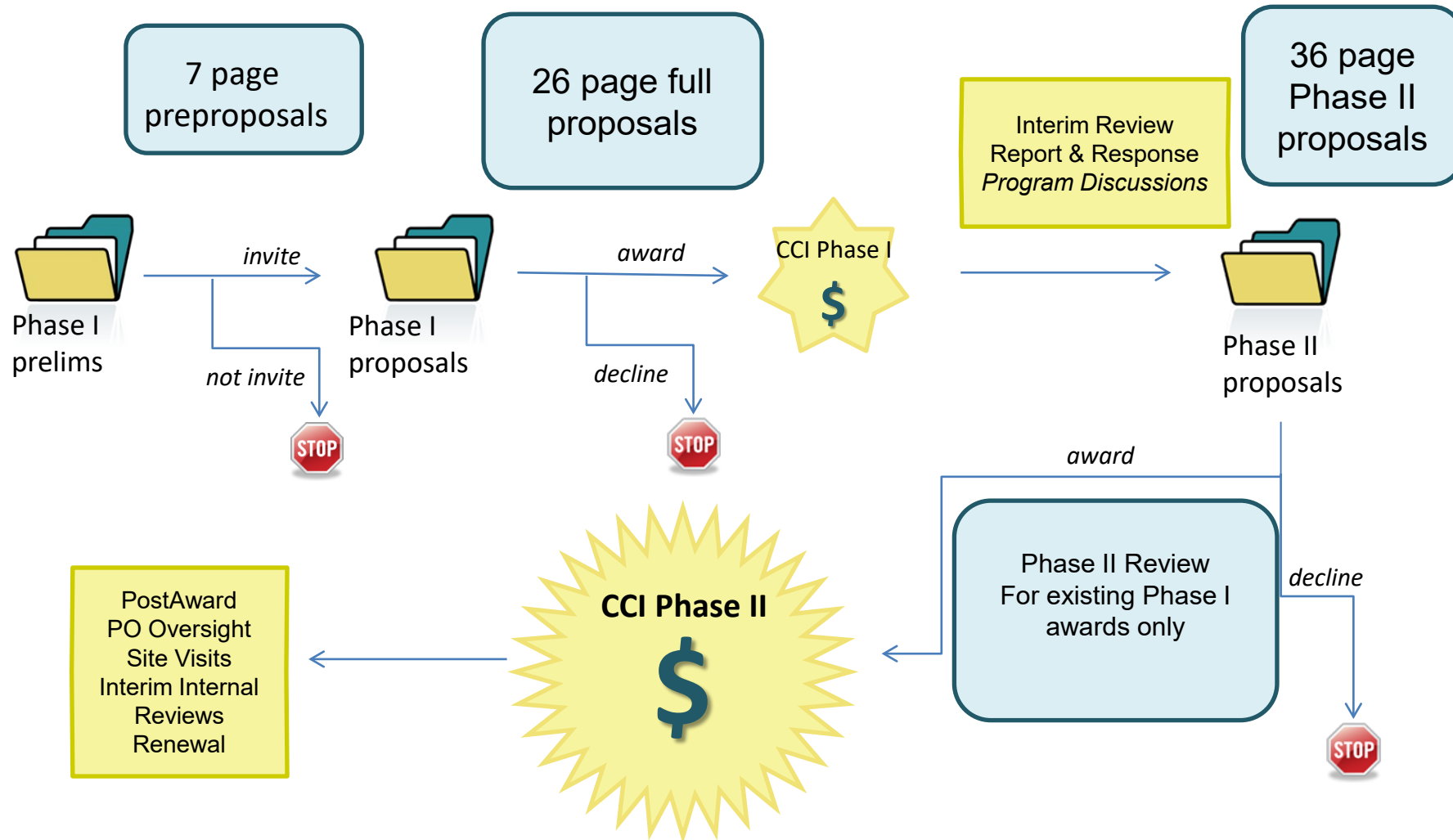


Phased Approach to Centers

- Phase I: \$1.8 million over 3 years, to develop the team, build out the center's programs, and conduct critical research to demonstrate that the approach can be productive. Phase II proposal/critical review during Yr 3.
- Phase II: \$20 million over 5 yrs (up to \$40 million over 10 yrs possible with renewal), to conduct high impact, transformative research that leads to innovation; integrated with higher education, broadening participation, and informal science communication. Post-award oversight, renewal in Yr 5.



From Idea to a Phase II Center



Current Phase I Centers

2017 Cohort: 9/2017 – 8/2020

CCI Phase I: NSF Synthetic Organic Electrosynthesis Center

CCI Phase I: NSF Center for First Principles Design of Quantum Processes

CCI Phase I: NSF Center for Autonomous Chemistry

CCI Phase I: NSF Center for Chemo-Mechanical Assembly

CCI Phase I: NSF Center for Genetically Encoded Materials

2018 Cohort: 9/2018 – 8/2021

CCI Phase I: NSF Center for the Chemistry of Molecularly Optimized Networks

CCI Phase I: NSF Center for Nanothread Chemistry

2019 Cohort: 9/2019 – 8/2022

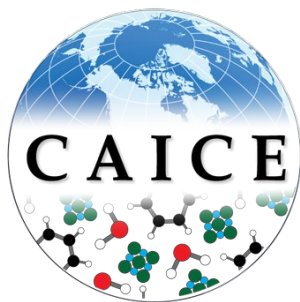
CCI Phase I: NSF Center for Sustainable Separations of Metals

CCI Phase I: NSF Center for Computer Assisted Synthesis

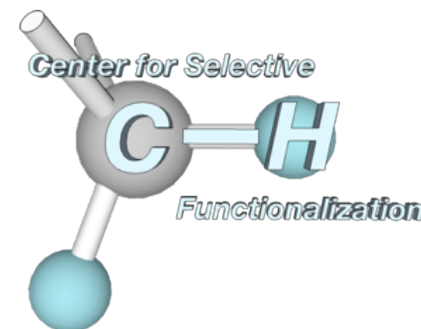
CCI Phase I: NSF Center for Synthesizing Quantum Coherence



Current Phase II Centers



Center for Aerosol Impacts on
Chemistry of the Environment



The Center for Sustainable Nanotechnology



CCI: Focus and Impact in (NSF) Chemistry

Open to projects in all fields supported by the NSF Division of Chemistry

Particularly encourage fundamental chemistry projects related to NSF's *Big Ideas*...

- Quantum Leap
- Understanding the Rules of Life
- Harnessing the Data Revolution

...or other articulated budget priorities

- Advanced Manufacturing
- Artificial Intelligence
- Biotechnology
- Quantum Information Science

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CCI Phase I Preliminary Proposals

- Cover Sheet
- Project Summary (1 page, IM & BI)
- Project Description (7 pages)
- References (up to 15 citations)
- *Biographical Sketches for PI and other senior personnel
- *Current and Pending Support for PI and other senior personnel
- Single Copy Documents
 - COA docs for PI and other senior personnel
 - Suggested Reviewers/Not to Use

**See new format in PAPPG*

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CCI Phase I Prelims: Project Description (7 pgs)

- Table of Investigators (1 page), including the names, institutions and expertise of the PI and all Faculty Associates. Non-funded collaborators may also be included on this table but should be clearly marked as such.
- Center Overview (approx 1 page) including the center **vision** and **potential for transformative impact in chemistry**;
- Phase I Research Plan (approx 4 pages) **research plans** (provide sufficient detail to evaluate the feasibility of the proposed work). Briefly describe how the Phase I research plan links to the broader Phase II center research goals;
- Summary of leadership and management plans (approx 1 page), specifically how these will enable **collaboration and synergy**; summaries of center-wide plans for required **broader impacts**.

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Review Criteria for Phase I Prelims

Intellectual Merit: The Intellectual Merit criterion encompasses the potential to advance knowledge; and

Broader Impacts: The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.

CCI-specific Criteria:

- To what extent is the **scientific vision** commensurate with a center investment?
- To what extent is there the **potential for transformative impact in chemistry?**
- To what extent is there potential/evidence for **synergy** or outcomes that would not be likely with individual investigator awards?

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Essential Broader Impacts for CCIs

Innovation (transfer of knowledge to nonacademic stakeholders via intellectual property protection, licensing, entrepreneurship and other knowledge transfer paths)

Higher Education and Professional Development (college through postdoc)

Broadening Participation (increasing engagement by URGs)

Informal Science Communication (communicating CCI science to the public, partnerships with informal science communication organizations are encouraged)

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Deadlines and Program Contacts

Submission Deadlines

Phase I

Aug 11, 2020 – Prelim Proposals

Feb 17, 2021 – Full Proposals
(by invitation)

Phase II

Jan 14, 2021 – Full proposals

Program Contacts

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Interested in submitting a CCI Prelim?

- Read the solicitation ([NSF 20-574](#))
- Browse some CCI websites
- Assemble your team, refine your idea
 - Please remind potential team members that they can only be a part of one prelim team and one full proposal team in a year.*
- Write up a short summary (1-1½ page), email it to one of the program contacts, ask for a phone or video-conference to discuss
- Submit prelim (by **Aug 11, 2020**)



Upcoming CHE Office Hours

June 26th 4PM – 5PM EST

Topic: CHE investment in Data-Driven Discovery Research and Data Infrastructure (joint session with Office of Advanced Cyberinfrastructure)

Related Funding Call: Dear Colleague Letter: Pilot Projects to Integrate Existing Data and Data-Focused Cyberinfrastructure to Enable Community-level Discovery Pathways ([NSF20-085](#)), CHE submission deadline 2/1/21.

Submit questions to: chemhighlights@nsf.gov

